

does not expect a great variation from the protection criteria that was derived from the radars that were used for these studies. Therefore, there is an indication that the results could apply to other similar radars that operate in the 9 000 - 9 500 MHz bands as well. Therefore a primary allocation for radiolocation can be added to the 9 000 - 9 200 and 9 300 - 9 500 MHz bands.

# **Proposal**

**USA/ /01      MOD**

**8 500-10 000 MHz**

Allocation to services		
Region 1	Region 2	Region 3
....		
9 000-9 200	AERONAUTICAL RADIONAVIGATION 5.337 <u>RADIOLOCATION</u> Radiolocation 5.471 <u>ADD 5.[9GHZ]</u>	
9 200-9 300	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473 5.474	
9 300-9 500	RADIONAVIGATION 5.476 <u>RADIOLOCATION</u> Radiolocation 5.427 5.474 <u>MOD 5.475 ADD 5.[9GHZ]</u>	
....		

**Reasons:** Provides a worldwide contiguous primary allocation to meet the required missions of radiolocation systems.

**USA/ /02      MOD**

**5.475** The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300-9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. ~~In the band 9 300-9 500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.~~

**Reasons:** Priority of the meteorological ground-based radars will be covered under the new footnote 5.[9GHZ].

**5.[9GHZ]** In the bands 9 000 - 9 200 MHz and 9 300 - 9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from systems operating in the aeronautical radionavigation service (9 000 - 9 200 MHz) or in the radionavigation service (9 300 - 9 500 MHz). In the 9 300 - 9 500 MHz band, ground-based radars used for meteorological purposes have priority over other radiolocation uses.

**Reasons:** Provide primary allocation to the radiolocation service, contiguous across 8 500 – 10 000 MHz, with sufficient bandwidth to meet emerging requirement for increased image resolution and increased range accuracy. The radionavigation service and the meteorological ground-based radars will continue to be protected from stations of the radiolocation service.

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**Document WAC/080(25.01.06):**

### **DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE**

**Agenda Item 1.6 (Res. 414):** to consider additional allocations for the aeronautical mobile (R) service in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)** and, to study current satellite frequency allocations, that will support the modernization of civil aviation telecommunication systems, taking into account Resolution **415 (WRC-03)**;

**Background Information:** This proposal considers additional allocations for the aeronautical mobile (R) service (AM(R)S ) in parts of the bands between 108 MHz and 6 GHz, in accordance with Resolution **414 (WRC-03)**.

Existing AM(R)S bands are nearing saturation in high traffic areas. In addition, new applications and concepts in air traffic management put further pressure on existing AM(R)S bands. Resolution **414 (WRC-03)** states that new technologies to support air navigation may not conform to the definition of aeronautical radionavigation in the Radio Regulations. WRC-03 provided a mechanism to implement these new aviation technologies by adding AM(R)S use in the 108-117.975 MHz band by footnote **5.197A**. One emerging application driving requirements for new AM(R)S spectrum is the integration of command and control for unmanned aircraft (UAs) into air traffic services (ATS) airspace. Conversely, AM(R)S spectrum is not appropriate for UA payload data use, such as downlinking information and operational data from the UA.

ITU-R Working Party 8B (WP8B) and the International Civil Aviation Organization (ICAO) developed a draft operational concept, and technology selection criteria and procedures for new aviation technology. WP8B and ICAO determined that the new aviation systems require two distinct categories of AM(R)S spectrum. The first category for surface applications could support high data throughput over moderate transmission distances. There is a high degree of reuse of this spectrum. For surface applications, ICAO and WP8B recommended 5 091-5 150 MHz as a suitable band. WP8B is also studying the band 5 091-5 150 MHz under agenda item 1.5 for the purpose of aeronautical mobile telemetry applications.

The second category for bidirectional air to ground applications could support a moderate data throughput over longer propagation distances out to radio line-of-sight. These applications

**Proposal:**

**890-1 300 MHz**

**Reasons:** To provide allocations to support evolving AM(R)S applications.

**USA/ /2 MOD**

**4 800-5 570 MHz**

Allocation to services		
Region 1	Region 2	Region 3
4 800-4 990	FIXED MOBILE 5.442 Radio astronomy 5.149 5.339 5.443	
4 990-5 000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149	
5 000-5 010	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space) 5.367	
5 010-5 030	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-space) 5.328B 5.443B 5.367	
5 030-5 150	AERONAUTICAL RADIONAVIGATION 5.367 5.444 5.444A ADD 5.367[A]	

**Reasons:** To provide allocations to support evolving AM(R)S applications.

**USA/ /3 ADD**

**5.328[C]** The band 960-1 024 MHz may also be used by the aeronautical mobile (R) service on a primary basis, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution [AM(R)S 960] and shall not cause harmful interference to nor claim protection from stations operating in the aeronautical radionavigation service operating in accordance with international aeronautical standards.

**Reasons:** To provide allocations to support evolving AM(R)S applications. Compatibility with regard to existing aeronautical radionavigation service (ARNS) systems will be addressed as a part of standards development for the new AM(R)S system.

**USA/ /4 ADD**

**5.367[A]** The band 5 091-5 150 MHz may also be used by the aeronautical mobile (R) service on a primary basis, limited to systems operating in accordance with recognized international aeronautical standards.

**Reasons:** To provide allocations to support evolving AM(R)S applications. Compatibility with regard to existing aeronautical radionavigation service (ARNS) systems will be addressed as a part of standards development for the new AM(R)S system.

RESOLUTION [AM(R)S 960] (WRC-07)

**Use of the band 960-1 024 MHz by aeronautical services**

The World Radiocommunication Conference (Geneva, 2007),

*considering*

- a) the current allocation of the frequency band 960-1 164 MHz to the aeronautical radionavigation service (ARNS);
- b) the use of the band 960-1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities per No. 5.328;
- c) that new technologies are being developed to support communications and air navigation, including airborne and ground surveillance applications;
- d) that new applications and concepts in air traffic management which are data intensive are being developed,

*recognizing*

- a) that precedence must be given to the ARNS operating in the frequency band 960-1 164 MHz;
- b) that, in accordance with Annex 10 of the Convention of the International Civil Aviation Organization (ICAO) on international civil aviation, all aeronautical systems must meet standards and recommended practices (SARPs) requirements;
- c) that compatibility criteria between aeronautical mobile (route) service (AM(R)S) systems and the ARNS operating in the frequency band 960-1 024 MHz will be established by ICAO through the development of relevant Standards and Recommended Practices (SARPs) for the communication systems;
- d) that all compatibility issues between AM(R)S systems operating in the 960-1024 MHz band and ARNS systems in that band must be addressed and resolved prior to such AM(R)S systems being placed into use,

*noting*

that no compatibility criteria currently exist between AM(R)S systems proposed for operations in the frequency band 960-1 024 MHz and the existing ARNS aeronautical systems in the band,

*resolves*

1       that the provisions of this Resolution and of No. 5.328C shall enter into force on [x] November 2007;

2       that any AM(R)S systems planned to operate in the frequency band 960-1 024 MHz shall, as a minimum, have performance standards published in Annex 10 of the ICAO Convention on International Civil Aviation, and that those performance standards will ensure compatibility with ARNS systems operating in accordance with international (ICAO) standards;

3       that any AM(R)S systems operating in the band 960-1 024 MHz shall impose no constraints on the operation and future development of co-band aeronautical radionavigation systems operating in accordance with international (ICAO) standards,

*instructs the Secretary-General*

to bring this Resolution to the attention of ICAO.

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**Document WAC/076(25.01.06):**

## **DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE**

**Agenda Item 1.12:** to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks" in accordance with Resolution 86 (WRC-03);

**Background information:** Resolution 86 (Rev. Marrakesh, 2002) requested that WRC-03 and subsequent Conferences review the regulatory procedures associated with the advance publication, coordination, notification and recording of frequency assignments pertaining to satellite networks. WRC-03 identified in Resolution 86 (WRC-03) the scope and the criteria to be used for the implementation of Resolution 86 (Rev. Marrakesh, 2002). Resolves 1 of Resolution 86 (WRC-03) specifically states that WRC-07 should "consider any proposals which deal with deficiencies in the advance publication, coordination, notification and recording procedures of the Radio Regulations (RR) for space services which have either been identified by the Board and included in the Rules of Procedure or which have been identified by administrations or by the Bureau as appropriate."

Currently, Appendix 4 makes certain data elements optional for the case of "Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9". These fields include i) the necessary bandwidth; ii) the carrier frequency or frequencies of the emission; iii) the maximum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type; iv) the minimum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type; v) the minimum power density, in

dB(W/Hz), supplied to the input of the antenna for each carrier type; and vi) the required C/N ratio. This information is required in order to determine whether unacceptable interference may be caused by the planned satellite network or system and communicate this information to the publishing administration and the Bureau under No. 9.3. To only require this information at the notification stage makes any analysis too late to benefit either administration. While most administrations have been supplying this data as part of the Advance Publication Information (API), there have been instances where the information was not made available. Therefore modifications to Appendix 4 are necessary to allow necessary analysis to take place during API.

## Proposal

### APPENDIX 4

#### ANNEX 2 Characteristics of satellite networks, earth stations or radio astronomy stations

USA/ /1 MOD

Table of characteristics to be submitted for space and radio astronomy services  
(WRC-0307)

Items in Appendix	C - CHARACTERISTICS TO BE PROVIDED FOR EACH GROUP OF FREQUENCY ASSIGNMENTS FOR A SATELLITE ANTENNA BEAM OR AN EARTH STATION OR RADIO ASTRONOMY ANTENNA	Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9
C.7	<b>NECESSARY BANDWIDTH AND CLASS OF EMISSION</b> (in accordance with Article 2 and Appendix 1)	
C.7.a	the necessary bandwidth and the class of emission: for each carrier In the case of Appendix 30B, required only for notification under Article 8	<del>OX</del>
C.7.b	the carrier frequency or frequencies of the emission(s)	<del>OX</del>
C.8	<b>POWER CHARACTERISTICS OF THE TRANSMISSION</b>	
C.8.a	<b>For the case where individual carriers can be identified:</b>	
C.8.a.1	the maximum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type Required if C.8.b.1 is not provided	O <sub>+</sub>
C.8.a.2	the maximum power density, in dB(W/Hz), supplied to the input of the antenna for each carrier type <sup>2</sup> Required if C.8.b.2 is not provided	+

C.8.b	<b>For the case where it is not appropriate to identify individual carriers:</b>	
C.8.b.1	the total peak envelope power, in dBW, supplied to the input of the antenna  For coordination or notification of an Appendix 30A earth station the values shall include the maximum range of power control Required if C.8.a.1 is not provided	$\Theta_{\pm}$
C.8.b.2	the maximum power density, in dB(W/Hz), supplied to the input of the antenna <sup>2</sup>  For coordination or notification of an Appendix 30A earth station the values shall include the maximum range of power control Required if C.8.a.2 is not provided	+
C.8.c.1	the minimum value of the peak envelope power, in dBW, supplied to the input of the antenna for each carrier type  If not provided, the reason for absence under C.8.c.2	$\Theta_{\pm}$
C.8.c.2	if C.8.c.1 is not provided, the reason for absence of the minimum value of the peak envelope power	$\pm$
C.8.c.3	the minimum power density, in dB(W/Hz), supplied to the input of the antenna for each carrier type <sup>2</sup>  If not provided, the reason for absence under C.8.c.4	$\Theta_{\pm}$
C.8.c.4	if C.8.c.3 is not provided, the reason for absence of the minimum power density	$\pm$
C.8.d.1	the maximum total peak envelope power, in dBW, supplied to the input of the antenna for each contiguous satellite bandwidth  For a satellite transponder, this corresponds to the maximum saturated peak envelope power Required only for a space-to-Earth or space-to-space link	$\underline{0}$
C.8.d.2	each contiguous satellite bandwidth  For the maximum saturated peak envelope power of the satellite transponder, this corresponds to the bandwidth of each transponder Required only for a space-to-Earth or space-to-space link	$\underline{0}$
C.8.e.1	for space-to-Earth, Earth-to-space or space-to-space links. for each carrier type, the greater of either the carrier-to-noise ratio, in dB, required to meet the performance of the link under clear-sky conditions or the carrier-to-noise ratio, in dB, required to meet the short-time objectives of the link inclusive of necessary margins  If not provided, the reason for absence under C.8.e.2	$\Theta_{\pm}$
C.8.e.2	if C.8.e.1 is not provided, the reason for absence of the carrier-to-noise ratio	$\pm$

**Reasons:** In order to allow for meaningful interference analysis to take place for the case of "Advance publication of a non-geostationary-satellite network not subject to coordination under Section II of Article 9", make additional technical information mandatory at the API stage.



**DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE**

**Agenda Item 1.21:** to consider the results of studies, regarding the compatibility between the radio astronomy service and the active space services in accordance with Resolution 740 (WRC-03), in order to review and update, if appropriate, the tables of threshold levels used for consultation that appear in the Annex to Resolution 739 (WRC-03);

**Background information:** In preparation for WRC-03, Task Group 1/7 conducted studies that led to the adoption of Recommendation ITU-R SM.1633, which contains nine Annexes that, using the methodology contained in the Recommendation, assess the compatibility of various band pairs between the radio astronomy service and space services. Not all studies in the Annexes were completed prior to WRC-03. On the basis of Recommendation SM.1633 and associated studies, WRC-03 adopted Resolutions 739 and 740.

Resolution 739 contains guidance to administrations operating space and radio astronomy stations in the band pairs contained in Tables 1-1 and 1-2, in order to come to acceptable solutions regarding space station unwanted emissions at a radio astronomy station. The Resolution includes a consultation process adopted at WRC-03 to assist administrations in reaching mutually acceptable solutions when unwanted emissions from space services exceed specified levels in certain radio astronomy bands. The consultation process is included in Resolution 739 and it will not be considered at WRC-07.

Resolution 740 calls for the completion of studies for the band pairs indicated in its associated band-pair Table. Comprehensive studies were needed to determine whether any of the band pairs from the Table of Resolution 740 should be added to the tables in Resolution 739, taking into consideration the impact on all the concerned active and passive services, and to determine the appropriate threshold levels for consultation. In accordance with the *resolves 1* of the Resolution 740, only the band pairs listed in the Table of Resolution 740 will be considered by WRC-07.

Studies have been conducted in TG 1/9 on a number of the band pairs listed in Resolution 740, and it is proposed at WRC-07 to add these band pairs to Table 1-2 of the Annex to Resolution 739. In a number of instances, existing NGSO systems already comply with the limits; systems that do not comply but that are already operating, or that have been advanced published prior to the entry in force of the Final Acts of, either WRC-03 or WRC-07, depending on the band (see *resolves 5* of the proposed draft revision of Resolution 739), are clearly grandfathered under the terms of Resolution 739, and are not subject to the consultation process.

Studies carried out in TG 1/9 have been documented in the appropriate Annexes of ITU-R Recommendation SM.1633, and, for some satellite systems, indicate levels of unwanted emissions in radio astronomy bands that will not be exceeded.

Proposal:

USA/ /1 (MOD)

## RESOLUTION 739 (REV. WRC-0307)

### Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands

The World Radiocommunication Conference (Geneva, 2003~~7~~),

**Reasons:** Editorial changes.

USA/ /2 MOD

*resolves*

5 that the space stations to be considered in the application of the above *resolves* are:

a) those designed to operate in the space service frequency bands listed in Table 1-1 of the Annex 1 or in the band 1613.8-1626.5 MHz listed in Table 1-2 of Annex 1, and for which advance publication information ~~is~~was received by the Bureau following the entry into force of the Final Acts of ~~this conference~~WRC-03; and

b) those designed to operate in all other space service frequency bands included in Table 1-2 of Annex 1, and for which advance publication information is received by the Bureau following the entry into force of the Final Acts of this conference;

**Reasons:** Following the pattern of the existing text, *resolves* 5 is modified to indicate that space systems advance published before the entry into force of the Final Acts of WRC-07 in the bands that are being added to Res. 739 are not to be considered in the application of *resolves* 1 to 3.

USA/ /3 (MOD)

## ANNEX 1 TO RESOLUTION 739 (REV. WRC-0307)

### Unwanted emission threshold levels

**Reasons:** Editorial changes.

TABLE 1-1  
 pfd thresholds for unwanted emissions from geostationary space stations  
 at a radio astronomy station

Space service	Space service band	Radio astronomy band	Single dish, continuum observations		Single dish, spectral line observations		VLBI <sup>(1)</sup>
			pfd <sup>(2)</sup>	Reference bandwidth	pfd <sup>(2)</sup>	Reference bandwidth	
	(MHz)	(MHz)	(dB(W/m <sup>2</sup> ))	(MHz)	(dB(W/m <sup>2</sup> ))	(kHz)	(dB(W/m <sup>2</sup> ))
BSS (space-to-Earth)	1 452-1 492						
MSS (space-to-Earth)	1 525-1 559	1 400-1 427	-180	27	-196	20	-166
MSS (space-to-Earth)	1 525-1 559						
MSS (space-to-Earth)	1 613.8-1 626.5	1 610.6-1 613.8	NA	NA	-194	20	-166
BSS (space-to-Earth)	2 655-2 670	2 690-2 700	-177	10	NR	25	-161
FSS (space-to-Earth)							
FSS (space-to-Earth)	2 670-2 690	2 690-2 700 (in Regions 1 and 3)	-177	10	NR	20	-161
	(GHz)	(GHz)	-	-	-	-	-
BSS (space-to-Earth)	21.4-22.0	22.21-22.5	NR	NR	NR	250	-128

NA: Not applicable, measurements of this type are not made in this band.

NR: No result available.

NOTE: Some annexes of Recommendation ITU-R SM. 1633 indicate levels of unwanted emissions in radio astronomy bands that certain satellite systems, by design, will not exceed.

<sup>(1)</sup> The reference bandwidth used for spectral line observations has also been used as reference bandwidth for very long baseline interferometry (VLBI) observations. In VLBI bands, where no spectral line observations are conducted, the reference bandwidth for VLBI observations has been determined using the assumption of Recommendation ITU-R RA.769 for a typical spectrometer channel (3 km/s).

<sup>(2)</sup> Integrated over the reference bandwidth with an integration time of 2 000 s.

TABLE 1-2

**epfd thresholds\* for unwanted emissions from non-GSO satellite systems  
at a radio astronomy station**

Space service	Space service band	Radio astronomy band	Single dish, continuum observations		Single dish, spectral line observations		VLBI <sup>(1)</sup>
			epfd <sup>(2)</sup>	Reference bandwidth	epfd <sup>(2)</sup>	Reference bandwidth	
	(MHz)	(MHz)	(dB(W/m <sup>2</sup> ))	(MHz)	(dB(W/m <sup>2</sup> ))	(kHz)	(dB(W/m <sup>2</sup> ))
<u>MSS (space-to-Earth)</u>	<u>137-138</u>	<u>150.05-153.0</u>	<u>-238</u>	<u>2.95</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<u>MSS (space-to-Earth)</u>	<u>387-390</u>	<u>322-328.6</u>	<u>-240</u>	<u>6.6</u>	<u>-255</u>	<u>10</u>	<u>-226</u>
<u>MSS (space-to-Earth)</u>	<u>400.15-401</u>	<u>406.1-410</u>	<u>-242</u>	<u>3.9</u>	<u>NA</u>	<u>NA</u>	<u>-226</u>
<u>BSS (space-to-Earth)</u>	<u>620-790</u>	<u>608-614</u>	<u>-241</u>	<u>6.0</u>	<u>NA</u>	<u>NA</u>	<u>-224</u>
<u>MSS (space-to-Earth)</u>	<u>1525-1559</u>	<u>1400-1427</u>	<u>-243</u>	<u>27.0</u>	<u>-259</u>	<u>20</u>	<u>-229</u>
<u>MSS (space-to-Earth)</u>	<u>1525-1559</u>	<u>1610.6-1613.8</u>	<u>NA</u>	<u>NA</u>	<u>-258</u>	<u>20</u>	<u>-230</u>
<u>RNSS (space-to-Earth)</u>	<u>1559-1610</u>	<u>1610.6-1613.8</u>	<u>NA</u>	<u>NA</u>	<u>-258</u>	<u>20</u>	<u>-230</u>
<u>MSS (space-to-Earth)</u>	<u>1 613.8-1 626.5</u>	<u>1 610.6-1 613.8</u>	<u>NA</u>	<u>NA</u>	<u>-258</u>	<u>20</u>	<u>-230</u>

NA: Not applicable, measurements of this type are not made in this band.

NOTE: Some annexes in Recommendation ITU-R SM.1633 indicate levels of unwanted emissions in radio astronomy bands that certain satellite systems, by design, will not exceed.

\* These epfd thresholds should not be exceeded for more than 2% of time.

<sup>(1)</sup> The reference bandwidth used for spectral line observations has also been used as reference bandwidth for VLBI observations. In VLBI bands, where no spectral line observations are conducted, the reference bandwidth for VLBI observations has been determined using the assumption of Recommendation ITU-R RA.769 for a typical spectrometer channel (3 km/s). Reference bandwidths of 10 kHz and 20 kHz, respectively, were assumed when calculating the VLBI threshold levels for the 406.1-410 MHz and 608-614 MHz radio astronomy bands, where no spectral line observations are made.

<sup>(2)</sup> Integrated over the reference bandwidth with an integration time of 2 000 s.

**Reasons:** Studies in TG 1/9 have been completed on the band pairs added to Table 1-2, and they have been incorporated into Recommendation ITU-R SM.1633. The notes added to the Tables reflect compliance with *resolves 1* for some systems.

USA/ 15 (MOD)

RESOLUTION 740 (REV. WRC-0307)

**Future compatibility analyses between the radio astronomy service and active space services in certain adjacent and nearby frequency bands**

The World Radiocommunication Conference (Geneva, 2003~~7~~),

**Reasons:** Editorial changes.

USA/ 16 MOD

*considering*

a) that adjacent or nearby primary service allocations have been made to the radio astronomy service (RAS); and to various space services, such as the fixed-satellite service (FSS) and the, mobile-satellite service (MSS), broadcasting-satellite service (BSS), and radionavigation satellite service (RNSS), hereafter referred to as "active space services";

**Reasons:** Consequential to the removal of entries in the Table for these services.

TABLE

## Band-pairs to be considered for further studies

Space service band MHz	Space service	Radio astronomy service band MHz
137-138	MSS (space-to-Earth)	<del>150.05-153.0 (No. 5.208A)</del>
387-390	MSS (space-to-Earth)	<del>322-328.6 (No. 5.208A)</del>
400.15-401	MSS (space-to-Earth)	<del>406.1-410 (No. 5.208A)</del>
620-790 (No. 5.311) see Resolution 545 (WRC-03)	BSS (space-to-Earth)	608-614
1 452-1 492	BSS (space-to-Earth) (non-GSO systems only)	1 400-1 427
<del>1 525-1 559</del>	<del>MSS (space-to-Earth) (non-GSO systems only)</del>	<del>1 400-1 427</del>
<del>1 525-1 559</del>	<del>MSS (space-to-Earth) (non-GSO systems only)</del>	<del>1 610.6-1 613.8</del>
1 559-1 610	RNSS (space-to-Earth)	1 610.6-1 613.8
2 655-2 670	BSS (space-to-Earth)	2 690-2 700
2 655-2 670	FSS (space-to-Earth) (Region 2)	2 690-2 700
2 670-2 690	FSS (space-to-Earth) (Region 2)	2 690-2 700
GHz		GHz
10.7-10.95	FSS (space-to-Earth)	10.6-10.7
21.4-22.0	BSS (space-to-Earth)	22.21-22.5

**Reasons:** Band pairs for which values were added to Table 1-2 of Resolution 739 are eliminated from Resolution 740.

## USA/ 18 MOD

*resolves*

1 to invite ITU-R to study the compatibility between the RAS and the corresponding active space services as listed in the Table only, with a view to updating or developing ITU-R Recommendations, if appropriate;

2 ~~that WRC-07 should consider the results of the studies as identified in resolves 1, in order to review and update, if appropriate, the tables of threshold levels for consultation in the Annex to Resolution 739 (WRC-03);~~

**Reasons:** The Conference has completed consideration of these studies.

**Document WAC/077(25.01.06):**

### Draft Preliminary View

**WRC-07 - Agenda Item 2:** to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution 28 (Rev. WRC-03), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in the Annex to Resolution 27 (Rev. WRC-03);

RECOMMENDATION	SUP	MOD	NOC	Comments		BR and OTHER SOURCES
M.257-3 Sequential single frequency selective-calling system for use in the maritime mobile service			X			
TF.460-6 Standard-frequency and time-signal emissions			X			
M.476-5 Direct-printing telegraph equipment in the maritime mobile service			X			
M.489-2 Technical characteristics of VHF radiotelephone equipment operating in the maritime mobile service in channels spaced by 25 kHz			X			
M.492-6 Operational procedures for the use of direct-printing telegraph equipment in the maritime mobile service			X			
M.541-8 Operational procedures for the use of digital selective-calling equipment in the maritime mobile service		X		Update to Rev 9.		-9 (5/04)
M.625-3 Direct-printing telegraph equipment employing automatic identification in the maritime mobile service			X			
M.627-1 Technical characteristics for HF maritime radio equipment using narrow-band phase-shift keying (NBPSK) telegraphy			X			
S.672-4 Satellite antenna radiation pattern for use as a design objective in the fixed-satellite service employing geostationary satellites			X			

RECOMMENDATION	SUP	MOD	NOC	Comments		BR and OTHER SOURCES
M.690-1 Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz			X			
P.838-2 Specific attenuation model for rain for use in prediction methods		X		Update to Rev. 3.		-3 (3/05)
SM.1138 Determination of necessary bandwidths including examples for their calculation and associated examples for the designation of emissions			X			
SA.1154 Provisions to protect the space research (SR), space operations (SO) and Earth-exploration satellite services (EES) and to facilitate sharing with the mobile service in the 2 025-2 110 MHz and 2 200-2 290 MHz bands			X			
M.1169 Hours of service of ship stations			X			
M.1171 Radiotelephony procedures in the maritime mobile service			X			
M.1172 Miscellaneous abbreviations and signals to be used for radiocommunications in the maritime mobile service			X			
M.1173 Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz			X			
M.1174-1 Technical characteristics of equipment used for on-board vessel communications in the bands between 450 and 470 MHz		X		Update to rev 2.		-2 (5/04)
M.1175 Automatic receiving equipment for radiotelegraph and radiotelephone alarm signals			X			
M.1187 A method for the calculation of the potentially affected region for a mobile-satellite service (MSS) network in the 1-3 GHz range using circular orbits			X			
S.1256 Methodology for determining the maximum aggregate power flux-density at the geostationary-satellite orbit in the band 6 700-7 075 MHz from feeder links of non-geostationary satellite systems in the mobile-satellite service in the space-to-Earth direction			X			



RECOMMENDATION	SUP	MOD	NOC	Comments		BR and OTHER SOURCES
SA.1260-1 Feasibility of sharing between active spaceborne sensors and other services in the range 420-470 MHz			X			
BO.1293-2 Protection masks and associated calculation methods for interference into broadcast-satellite systems involving digital emissions			X			
S.1340 Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the Earth-to-space direction in the band 15.4-15.7 GHz			X			
S.1341 Sharing between feeder links for the mobile-satellite service and the aeronautical radionavigation service in the space-to-Earth direction in the band 15.4-15.7 GHz and the protection of the radio astronomy service in the band 15.35-15.4 GHz			X			
S.1428-1 Reference FSS earth-station radiation patterns for use in interference assessment involving non-GSO satellites in frequency bands between 10.7 GHz and 30 GHz			X			
BO.1443-1 Reference BSS earth station antenna patterns for use in interference assessment involving non-GSO satellites in frequency bands covered by RR Appendix 30			X			
S.1586 Calculation of unwanted emission levels produced by a non-geostationary fixed-satellite service system at radio astronomy sites			X			
F.1613 Operational and deployment requirements for fixed wireless access systems in the fixed service in Region 3 to ensure the protection of systems in the Earth exploration-satellite service (active) and the space research service (active) in the band 5 250-5 350 MHz			X			
RA.1631 Reference radio astronomy antenna pattern to be used for compatibility analyses between non-GSO systems and radio astronomy service stations based on the epfd concept			X			
SA.1632 Sharing in the band 5 250-5 350 MHz between the Earth exploration-satellite service (active) and wireless access systems (including radio local area networks) in the mobile service			X			

RECOMMENDATION	SUP	MOD	NOC	Comments		BR and OTHER SOURCES
M.1638 Characteristics of and <i>protection criteria for sharing studies</i> for radiolocation, aeronautical radionavigation and meteorological radars operating in the frequency bands between 5 250 and 5 850 MHz			X			
M.1643 Technical and operational requirements for aircraft earth stations of aeronautical mobile-satellite service including those using fixed-satellite service network transponders in the band 14-14.5 GHz (Earth-to-space)			X			

Draft Preliminary View

WRC-07 Agenda Item 4

“in accordance with Resolution 95 (Rev. WRC-2003), to review the Resolutions and Recommendations of the previous Conferences with a view to their possible revision, replacement or abrogation”

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
RESOLUTION 1 (Rev. WRC-97) Notification of frequency assignments			X				
RESOLUTION 2 (Rev. WRC-03) Relating to the equitable use, by all countries, with equal rights, of the geostationary-satellite orbit and of frequency bands for space radiocommunication services			X				
RESOLUTION 4 (Rev. WRC-03) Period of validity of frequency assignments to space stations using the geostationary-satellite orbit			X				
RESOLUTION 5 (Rev. WRC-03) Relating to technical cooperation with the developing countries in the study of propagation in tropical areas			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
RESOLUTION 7 (Rev. WRC-03) Relating to the development of national radio frequency management			X				
RESOLUTION 10 (Rev. WRC-2000) Use of two-way wireless telecommunications by the Red Cross and Red Crescent Movement			X				
RESOLUTION 13 (Rev. WRC-97) Formation of call signs and allocation of new international series			X				
RESOLUTION 15 (Rev. WRC-03) Relating to international cooperation and technical assistance in the field of space radiocommunications			X				
RESOLUTION 18 (Mob-83) Relating to the procedure for identifying and announcing the position of ships and aircraft of States not parties to an armed conflict			X				
RESOLUTION 20 (Rev. WRC-03) Technical cooperation with developing countries in the field of aeronautical telecommunications			X				
RESOLUTION 21 (Rev. WRC-03) Implementation of changes in frequency allocations between 5 900 kHz and 19 020 kHz					Pending decision on WRC-07 Agenda Item 1.13		

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
RESOLUTION 25 (Rev. WRC-03) Operation of global satellite systems for personal communications			X				
RESOLUTION 26 (Rev. WRC-97) Footnotes to the Table of Frequency Allocations in Article 5 of the Radio Regulations			X				WRC-07 Agenda Item 1.1 WRC-10 Agenda Item 2.1
RESOLUTION 27 (Rev. WRC-03) References to ITU-R and ITU-T Recommendations in the Radio Regulations		X			Possible modification to include reference in Vol 4 of RR for IBR of parts of recommendations.		WRC-07 Agenda Item 2 WRC-10 Agenda Item 4
RESOLUTION 28 (Rev. WRC-03) Revision of references to ITU-R Recommendations incorporated by reference in the Radio Regulations			X				WRC-07 Agenda Item 2 WRC-10 Agenda Item 4
RESOLUTION 33 (Rev. WRC-03) Bringing into use of space stations in the broadcasting-satellite service, prior to the entry into force of agreements and associated plans for the broadcasting-satellite service			X				
RESOLUTION 34 (Rev. WRC-03) Relating to the establishment of the broadcasting-satellite service in Region 3 in the 12.5-12.75 GHz frequency band and to sharing with space and terrestrial services in Regions 1, 2 and 3			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
RESOLUTION 42 (Rev. WRC-03) Use of interim systems in Region 2 in the broadcasting-satellite and fixed-satellite (feeder-link) services in Region 2 for the bands covered by Appendices S30 and S30A			X				
RESOLUTION 49 (Rev. WRC-03) Administrative due diligence applicable to some satellite communication services	X				RCS Proposal for WRC-07 Agenda Item 1.12		
RESOLUTION 51 (Rev. WRC-2000) Transitional arrangements relating to the advance publication and coordination of satellite networks	X				Overtaken by events. Possible Abrogation item.		
RESOLUTION 55 (WRC-2000) Temporary procedures for improving satellite network coordination and notification procedures	X						
RESOLUTION 56 (Rev. WRC-03) Modifications of the procedures and requirements for advanced publication					Pending decisions under WRC-07 Agenda Item 1.12		
RESOLUTION 57 (WRC-2000) Modification of bringing into use and administrative due diligence requirements as a consequence of allocation changes above 71 GHz					Pending decision under WRC-07 Agenda Item 1.12		

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
RESOLUTION 58 (WRC-2000) Transitional measures for coordination between certain specific GSO FSS receive earth stations and non-GSO FSS transmit space stations in the frequency bands 10.7-12.75 GHz, 17.8-18.6 GHz, and 19.7-20.2 GHz where epfd down limits apply			X				
RESOLUTION 63 (Rev. WRC-03) Relating to the protection of radiocommunication services against interference caused by radiation from industrial, scientific and medical (ISM) equipment			X				
RESOLUTION 72 (Rev. WRC-2000) Regional preparations for World Radiocommunication Conferences			X				
RESOLUTION 73 (Rev. WRC- 2000) Measures to solve the incompatibility between the broadcasting-satellite service in Region 1 and the fixed-satellite service in Region 3 in the frequency band 12.2-12.5 GHz			X				
RESOLUTION 74 (Rev. WRC- 03) Process to keep the technical bases of Appendix 7 current			X				
RESOLUTION 75 (WRC-2000) Development of the technical basis			X				

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
for determining the coordination area for coordination of a receiving earth station in the space research service (deep space) with transmitting stations of high-density systems in the fixed service in the 31.8-32.3 GHz and 37-38 GHz bands							
RESOLUTION 76 (WRC-2000) Protection of GSO FSS and GSO BSS networks from the maximum aggregate equivalent power flux-density produced by multiple non-GSO FSS systems in frequency bands where equivalent power flux-density limits have been adopted			X				
RESOLUTION 79 (WRC-2000) Development of the technical basis for coordination of radio astronomy stations with transmitting high-density fixed systems in the fixed service, in the band 42.5-43.5 GHz			X				
RESOLUTION 80 (Rev. WRC-2000) Due diligence in applying the principles embodied in the Constitution			X				WRC-07 Agenda Item 7.1
RESOLUTION 81 (WRC-2000) Evaluation of the administrative due diligence procedure for satellite networks	X				Pending decisions under WRC-07 Agenda Item 1.12		
RESOLUTION 85 (WRC-03) Application of Article 22 of the			X				



<b>RESOLUTION / RECOMMENDATION</b>	<b>S U P</b>	<b>M O D</b>	<b>N O C</b>	<b>N O C</b>	<b>NOTES</b>	<b>OTHER</b>	<b>BR and OTHER SOURCES</b>
Radio Regulations to the protection of geostationary fixed-satellite service and broadcasting-satellite service networks from non-geostationary fixed-satellite service systems							
<b>RESOLUTION 86 (WRC-03)</b> Scope and criteria to be used for the implementation of Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference			X		Consequential to WRC-07 Agenda Item 1.12		WRC-07 Agenda Item 1.12
<b>RESOLUTION 87 (WRC-03)</b> Date of entry into force of certain provisions of the Radio Regulations relating to the non-payment of cost-recovery fees	X						
<b>RESOLUTION 88 (WRC-03)</b> Rationalization of Articles 9 and 11 of the Radio Regulations	X						Tie to WRC-07 Agenda Item 1.12
<b>RESOLUTION 89 (WRC-03)</b> Backlog in satellite filings			X				
<b>RESOLUTION 95 (Rev. WRC-03)</b> General review of the Resolutions and Recommendations of world administrative radio conferences and world radiocommunication conferences			X				WRC-07 Agenda Item 4 WRC-10 Agenda Item 6
<b>RESOLUTION 96 (WRC-03)</b> Provisional application of certain provisions of the Radio Regulations as revised by WRC-03	X						

RESOLUTION / RECOMMENDATION	S U P	M O D	N O C	N O C	NOTES	OTHER	BR and OTHER SOURCES
and abrogation of certain Resolutions and Recommendations							
RESOLUTION 105 (Orb-88) Improvement of the quality of certain allotments in Part A of the fixed-satellite service Plan			X				
RESOLUTION 111 (Orb-88) Planning of the fixed-satellite service in the bands 18.1-18.3 GHz, 18.3-20.2 GHz and 27-30 GHz			X				
RESOLUTION 114 (Rev. WRC-03) Use of the band 5 091 - 5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite service)			X				WRC-10 Agenda Item 3.1
RESOLUTION 122 (Rev. WRC-03) Use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz by high altitude platform stations in the fixed service and by other services	X						WRC-07 Agenda Item 1.8
RESOLUTION 124 (REV. WRC-00) Protection of the fixed service in the frequency band 8 025-8 400 MHz sharing with geostationary-satellite systems of the earth exploration-satellite service (space-to-earth)	X				Consequential to change in footnote 5.462A to include values contained in F.1502.		
RESOLUTION 125 (WRC-97) Frequency sharing in the bands					Pending decisions under WRC-07 Agenda Item 1.7		